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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
09/869,941	01/04/2002	Wendell B Colson	4686/00004	4413

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EXAMINER	
BEFUMO, JENNA LEIGH	

ART UNIT	PAPER NUMBER
1771	

DATE MAILED 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/869,941	COLSON ET AL.
	Examiner	Art Unit
	Jenna-Leigh Befumo	1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a) In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 October 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-157* is/are pending in the application.

4a) Of the above claim(s) *1-43,71-113 and 128-142* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *44-58,114-121,124-127 and 143-157* is/are rejected.

7)☒ Claim(s) *59-70,122 and 123* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group IV, claims 44 – 70, 114 – 127, and 143 – 157, is acknowledged. Claims 1 – 43, 71 – 113, and 128 – 142 are withdrawn from consideration as being drawn to a nonelected invention.

Claim Objections

2. Claims 59 – 70 and 122 – 123 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 56 – 58, 117, 121, 146, and 155 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. The phrase "the adhesive material … has a low density" in claim 56 is indefinite. First, it is unclear if the Applicant is referring to the actual density of the adhesive composition or, if instead, the Applicant is referring to the density of the adhesive in the nonwoven composite fabric. Second, it is unclear what the Applicant means by "low" density. The density of the adhesive will inherently be lower than an adhesive with a higher density. Claims 57 and 58 are rejected due to their dependency on claim 56.

6. Claims 117, 146, and 155 are indefinite. The Applicant lists rayon as a type of natural fiber. However, rayon is actually a synthetic fiber since rayon is made by chemically modifying cellulosic material to produce a fiber. Therefore, listing rayon as a type of natural fiber is contrary to its ordinary meaning and makes the claim indefinite.

7. Claims 121 is indefinite since the claims depends on claims 114 – 121. In other words, the claim depends from itself. Therefore, it is unclear what the scope of the claim would be if claim 121 depended on claim 121.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claim 44, 48, 53, 114, 143, and 149 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 24 of copending Application No. 10/088,576. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in both applications are drawn to the same finished product, i.e., a nonwoven fabric with parallel yarns running in the warp and weft directions which are adhesively bonded together.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. Claims 44 – 70, 114 – 127, and 143 – 157 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9 – 16 of copending Application No. 10/088,613. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in both applications are drawn to the same finished product, i.e., a nonwoven fabric with parallel yarns running in the warp and weft directions which are adhesively bonded together.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 48, 51 – 56, 143, 144, 146, 149 – 153, and 155 are rejected under 35 U.S.C. 102(b) as being anticipated by Hartstein (3,591,434).

Hartstein discloses a nonwoven fabric comprising a first set of yarns laid parallel to one another, and a second set of parallel yarns cross-laid to the first set of yarns (abstract). The yarns are bonded together by a thermoplastic film layer which is located between the two sets of yarns to form a bi-axial laminated nonwoven fabric (abstract). The yarns can be made from flexible materials such as rayon, synthetic fibers, cotton, or natural fibers, and the first set of yarns can be

a different material from the second set of yarns (column 1, lines 50 – 54). The two sets of yarns are laid at an angle of approximately 90° to each other(column 4, lines 23 – 24). The fabric may be used as blinds, carpet backing, reinforcement materials, placemats, or wall paper (column 4, lines 32 – 36). Therefore, claims 53 – 56, 143, 144, 146, 149, 153, and 155 are anticipated.

Even though the product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or an obvious variant from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the Applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). Therefore, claims 48, 51, and 52 are anticipated by Hartstein.

Further, Claims 150 – 152 are rejected with claim 149 since the method limitations set forth in those claims fail to add any additional structural limitations to the nonwoven fabric set forth in claim 149.

13. Claims 44, 47, 48, 51 – 54, 56 – 58, 124, 127, 143 – 147, and 149 – 156 are rejected under 35 U.S.C. 102(b) as being anticipated by Pittman (3,753,842).

Pittman discloses a nonwoven textile comprising a plurality of warp yarns and a plurality of fill yarns bonded together at their crossing points by an adhesive composition (abstract). As shown in the figures, the warp and fill yarns can be bonded at approximately 90° angles to each other. Also, the warp and fill yarns are made from various materials including synthetic fibers such as nylon, polyester, glass, and rayon or natural fibers, such as jute, ramie, hemp, and cotton

(column 2, lines 41 – 53). The warps yarns could be made from a different material than the fill yarns to optimize the fabric's properties (column 2, lines 55 – 57). Finally, the fabric can have up to 40% adhesive by weight of the fabric (column 3, lines 23 – 26). Therefore, claims 44, 47, 48, 51 – 54, 56 – 58, 124, 127, 143 – 147, and 149 – 156 are anticipated. As set forth above, the process limitations have not been given patentable weight at this time, since it hasn't been shown that those process steps would produce a structurally different product from the prior art.

14. Claims 48, 49, 51 – 54, 56, 114 – 116, 118, 121, 143 – 145, 147, 149 – 154, and 156 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. (4,460,633).

Kobayashi et al. discloses a nonwoven reinforcement fabric comprising a set of warp yarns on one or both sides of a set of weft yarns which contain an adhesive to bond the yarns together at their intersections (abstract). As shown in the figures the yarns are laminated together at approximately a 90° angle to each other. The warp yarns are made from high strength, high modulus materials such as carbon fiber, graphite fiber, glass fiber, aromatic polyamide fiber and the like (columnn 2, lines 51 – 54). The warp yarns have a fineness of 300 to 30000 denier (column 2, lines 55). The weft yarns can be made from glass, polyester, carbon, graphite, or aromatic polyamide fibers (column 2, lines 64 – 68). The weft fibers have a fineness of 100 – 1500 denier (column 3, lines 1). The warp yarns have a density of 1 to 20 yarns per cm, or 2.5 to 51 yarns/inch (column 3, line 29). The weft yarns have a density of 0.5 to 5 ends/cm, or 1.3 to 12.7 ends/inch (column 3, line 30). Therefore, claims 48, 49, 51 – 54, 56, 114 – 116, 118, 121, 143 – 145, 147, 149 – 154, and 156. As set forth above, the process limitations have not been given patentable weight at this time, since it hasn't been shown that those process steps would produce a structurally different product from the prior art.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claims 44 – 47, 49, 50, 57, 58, 114, 115, 117, 120, and 121 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartstein.

The features of Hartstein have been set forth above. While Hartstein discloses that a thin film is used as the adhesive layer between the two sets of yarns, Hartstein fails to teach the percent of adhesive based on the total weight of the fabric. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the claimed adhesive amount, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955). One of ordinary skill would be motivated to choose an amount of adhesive which provides the laminate with sufficient bond strength and dimensional stability, without adding too much adhesive so that the adhesive makes the fabric too stiff and inflexible for in uses where flexibility is required. Therefore, claims 44, 47, 57, and 58 are rejected.

Further, while Hartstein discloses that the yams are spaced in accordance to the desired fabric density (column 2, lines 49 – 50), Hartstein fails to teach the range of fabric density for the warp and weft yarns. Further, Hartstein discloses that the fabric can be used for various end

products which would require different levels of coverage as well as having different strength and reinforcement requirements.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose a warp and weft density between 40 and 100 yarns/inch, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art, as set forth above. One of ordinary skill in the art would choose the claimed warp and weft density to produce a reinforcement fabric with high strength properties and stability properties in both the warp and weft direction. Also, one of ordinary skill in the art would choose a high warp and weft density to produce a fabric with a high cover factor to make the fabric less see through when used in applications such as wall paper or blinds. Therefore, claims 45, 46, 49, 50, 114, 115, 117, 120, and 121 are rejected.

17. Claims 116, 118, 124 – 127, 145, 147, 154, and 156 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartstein in view of Pittman.

The features of both Hartstein and Pittman have been set forth above. While Hartstein discloses that synthetic fibers can be used in the warp and weft yarns, Hartstein fails to teach what types of synthetic fibers can be used. Pittman is drawn to bi-axial laminated nonwoven fabrics. Pittman discloses that synthetic fibers such as rayon, nylon, polyester, and glass can be used to produce the nonwoven fabric. Therefore, it would have been obvious to one of ordinary skill in the art to use the types of synthetic fibers taught by Pittman in the nonwoven fabric taught by Hartstein, since Hartstein suggests that other synthetic fibers besides rayon can be used to produce the nonwoven fabrics. Further, the nylon, polyester, and glass fibers, would give the

final product different strength, flexibility and stability properties than natural fibers. Therefore, claims 116, 118, 124 – 127, 145, 147, 154, and 156 are rejected.

18. Claims 45, 46, 49, 50, 114 – 118, 120, 121, 125, and 126 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pittman.

The features of Pittman have been set forth above. Pittman fails to teach the warp and weft density of the fabric. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose a warp and weft density between 40 and 100 yarns/inch, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art, as set forth above. One of ordinary skill in the art would choose the claimed warp and weft density to produce a reinforcement fabric with high strength properties and stability properties in both the warp and weft direction. Therefore, claims 45, 46, 49, 50, 114 – 118, 120, 121, 125, and 126 are rejected.

19. Claims 119, 148, and 157 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartstein, Pittman or Kobayashi et al..

The features of Hartstein, Pittman, and Kobayashi et al. have been set forth above. While all the references disclose that various fiber materials can be used in the nonwoven fabric, including inorganic fibers, synthetic fibers, and natural fibers, Hartstein, Pittman, and Kobayashi et al. all fail to teach using metal fibers. However, it would have been obvious to one having ordinary skill in the art to choose various types of metal fibers, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. One of ordinary skill in the art would be

motivated to choose metal fibers as a reinforcement material with good resistance properties and strength properties. Therefore, claims 119, 148, and 157 are rejected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (571) 272-1472. The examiner can normally be reached on Monday - Friday (8:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-0994.

Jenna-Leigh Befumo
January 12, 2004

CHERYL A. JUSKA
PRIMARY EXAMINER